



EAST BAY DISCHARGERS AUTHORITY  
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*A Joint Powers Public Agency*

**ITEM NO. 12**

**OPERATIONS & MAINTENANCE COMMITTEE AGENDA**

**Tuesday, January 14, 2020**

**9:00 A.M.**

**East Bay Dischargers Authority  
2651 Grant Avenue, San Lorenzo, CA 94580**

**Committee Members: Cutter (Chair); Walters**

**OM1. Call to Order**

**OM2. Roll Call**

**OM3. Public Forum**

**OM4. EBDA NPDES Performance**

(The Committee will be updated on EBDA's NPDES report.)

**OM5. Status Report**

(The Committee will be updated on EBDA's O&M activities.)

**OM6. Resolution Authorizing the General Manager to Enter into a Cooperative Agreement to Provide Funding for Shared Temporary Deployment of Precipitation Forecasting System with Sonoma County Water Agency**

(The Committee will consider a resolution approving the agreement.)

**OM7. Adjournment**

(Any member of the public may address the Commission at the commencement of the meeting on any matter within the jurisdiction of the Commission. This should not relate to any item on the agenda. It is the policy of the Authority that each person addressing the Commission limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Commission on an agenda item should do so at the time the item is considered. It is the policy of the Authority that oral comments be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available in the Boardroom and are to be completed prior to speaking.)

(In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Administrative Assistant at the EBDA office at (510) 278-5910 or [kyambao@ebda.org](mailto:kyambao@ebda.org). Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.)

(In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are posted on the East Bay Dischargers Authority website located at <http://www.ebda.org>.)

**The next O&M Committee meeting will be held  
Tuesday, February 18, 2020, at 9:00 a.m.**

## **ITEM NO. OM4 EBDA NPDES PERFORMANCE**

### **Recommendation**

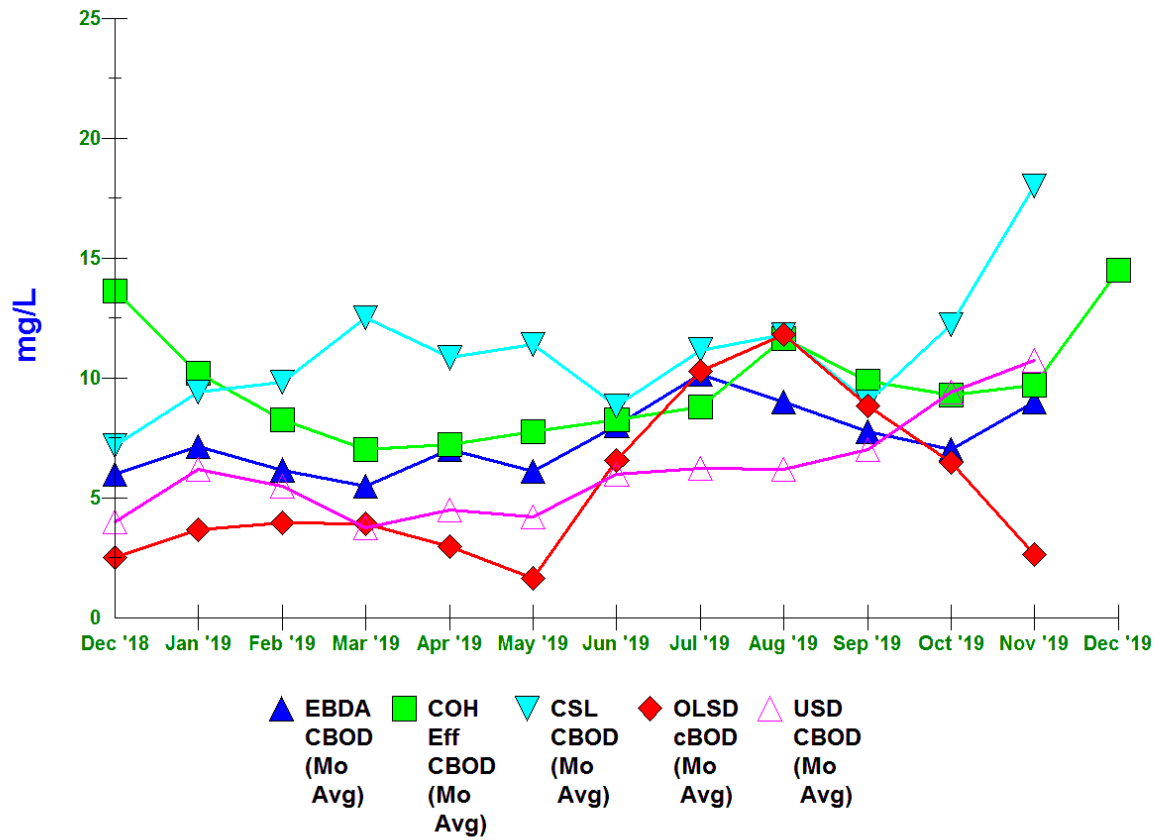
For the Committee's information only; no action is required.

### **Permit Compliance Issues**

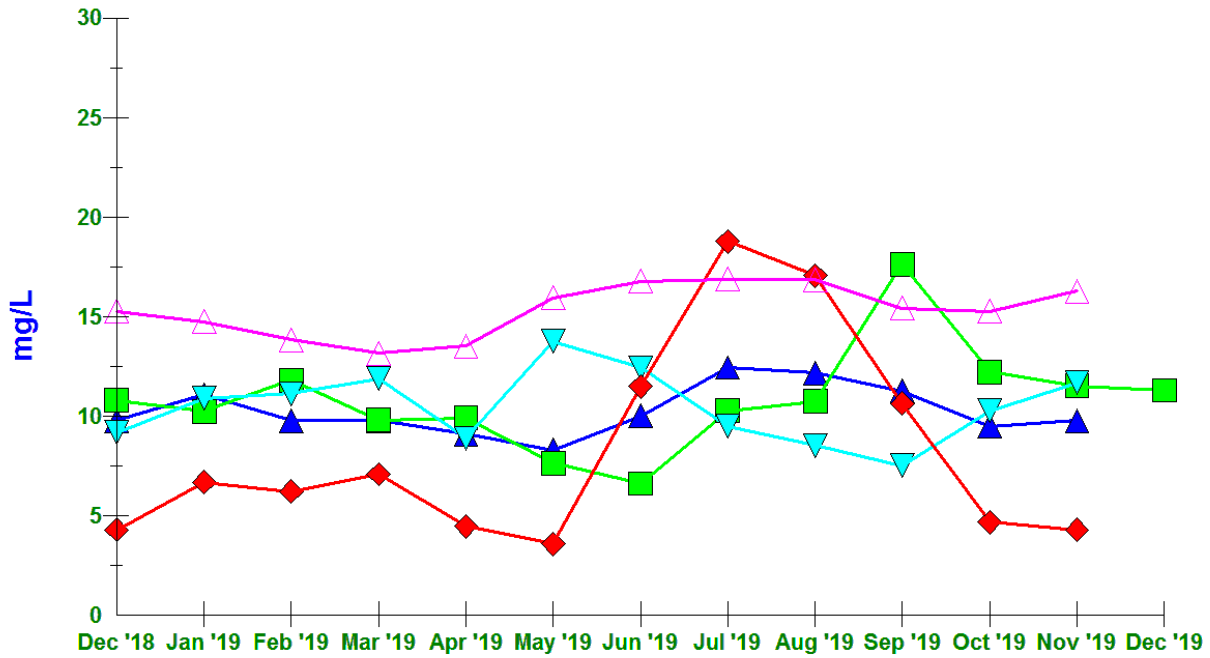
There were no NPDES permit violations in November and preliminary data from December are also free of permit exceedances. Member Agency CBOD and TSS performance are shown below. A table with bacterial indicators is also included.

As noted previously, at the beginning of November, despite cooling weather, one high result for fecal coliform was observed. Staff maintained a high residual for the remainder of November to ensure that no additional high values were detected and conducted training on maintenance activities for sampling equipment to prevent future occurrences. In December, another high fecal coliform was detected. EBDA's fecal coliform limit of 1100 MPN/100mL is expressed as a 90<sup>th</sup> percentile, with the expectation that out of 11 samples, one high result above 1100 MPN/100mL can be discarded as anomalous. Therefore, the high results did not lead to permit violations in November or December. However, they did lead to higher chlorine and SBS dosing than typical for the season. To ensure continued compliance and manage chemical costs, staff is recommending hiring a consultant with expertise in bacterial regrowth to evaluate the EBDA system and provide recommendations. The consultant's input would then be incorporated into a chlorine-dosing Standard Operating Procedure (SOP) developed in consultation with the Member Agencies. The goal is to complete the SOP prior to next summer, when warmer weather typically accelerates bacteria growth.

**EBDA CBOD (Limit=25 ppm)**



### EBDA TSS (Limit 30 ppm)



▲ EBDA TSS (Mo Avg)   
 ■ COH Eff TSS (Mo Avg)   
 ▼ CSL TSS (Mo Avg)   
 ◆ OLSD TSS (Mo Avg)   
 △ USD TSS (Mo Avg)

EBDA Eff TSS

## EBDA Bacterial Indicators

Date	FECAL	ENTERO
	MPN/ 100mL	MPN/ 100mL
Limit (90th Percentile)	1100	
Limit (Geomean)	500	240
<b>Jan 2019, Geomean</b>	<b>6</b>	<b>3</b>
<b>Feb 2019, Geomean</b>	<b>3</b>	<b>3</b>
<b>Mar 2019, Geomean</b>	<b>7</b>	<b>2</b>
<b>April 2019, Geomean</b>	<b>7</b>	<b>&lt; 2</b>
<b>May 2019, Geomean</b>	<b>14</b>	<b>2</b>
<b>June 2019, Geomean</b>	<b>16</b>	<b>3</b>
<b>July 2019, Geomean</b>	<b>9</b>	<b>&lt; 3</b>
<b>August 2019, Geomean</b>	<b>32</b>	<b>&lt; 3</b>
<b>Sept 2019, Geomean</b>	<b>12</b>	<b>3</b>
<b>Oct 2019, Geomean</b>	<b>35</b>	<b>2</b>
11/4/2019	3447	4
11/5/2019	17	2
11/6/2019	220	< 2
11/11/2019	101	< 2
11/12/2019	22	2
11/13/2019	4	2
11/18/2019	12	8
11/19/2019	23	2
11/20/2019	17	2
11/25/2019	4	< 2
11/26/2019	17	< 2
<b>Nov 2019, Geomean</b>	<b>32</b>	<b>2</b>
12/2/2019	17	< 2
12/3/2019	11	2
12/4/2019	8	< 2
12/9/2019	65	2
12/10/2019	5400	2
12/16/2019	17	4
12/17/2019	11	< 2
12/23/2019	2	< 2
12/24/2019	8	< 2
12/30/2019	2	< 2
12/31/2019	22	< 2
<b>Dec 2019, Geomean</b>	<b>18</b>	<b>&lt; 2</b>

## **ITEM NO. OM5 STATUS REPORT**

### **Alvarado Effluent Pump Station (AEPS)**

#### **Pump Cavitation Study & Station Optimization**

On December 9, 2019, EBDA staff provided comments to Carollo Engineers, Inc. (Carollo) on the Draft Cavitation Study Project Memorandum. After Carollo incorporates staff comments, it will be sent to the MAC for review and a meeting will be scheduled with USD staff to review the memorandum.

#### **Effluent Pump No. 6 Refurbishment**

On December 12, 2019, USD maintenance staff reinstalled the temporarily repaired impeller and reassembled the pump so that it could be available for wet weather. The new replacement impeller was ordered on December 20, 2019, with lead time of 12 to 16 weeks.

Once the repaired impeller was installed, however, the pump was tested and the Variable Frequency Drive (VFD) experienced a major failure. EBDA staff scheduled a service call with Rockwell Automation Field Service on December 27, 2019. The Field Service Engineer determined that the inverter section of the VFD was blown and needed to be replaced. EBDA staff is in the process of obtaining quotes for repair/replacement of the inverter. Once the quotes are obtained, they will be presented to the MAC. A resolution will be presented to the Commission next month for the VFD repair/replacement. This VFD was manufactured in July of 2015 and placed-in-service in July of 2016.

### **Hayward Effluent Pump Station (HEPS)**

#### **Motor Control Center (MCC) Replacement Project**

In December, several meetings were held to discuss modifications to the layout of the perimeter fencing and the pump station coatings bid. A \$2,126 contract change order was written to install an additional gate in the perimeter fencing to improve access to the portable generator plug and load bank testing electrical panels, to the north of the new MCC building. On January 6, 2020, the fencing subcontractor started installing the perimeter fencing.

A contract change order is also being negotiated to expand the scope of the coatings subcontractor. EBDA is requesting that the existing generator fuel tank be coated as part of the MCC project. Coating the fuel tank now is preferable because a new platform that will be installed around the generator to improve future access for operations and maintenance activities will make it more difficult to coat the tank in the future.

Upcoming work on the site includes completing installation of perimeter fencing with barbed wire around the pump station and MCC building. GSE will also install new stairs into the MCC building and the new platform around the generator. GSE's coatings subcontractor, Redwood Painting Co. Inc., will paint the station piping when weather conditions allow.

### **Oro Loma Effluent Pump Station (OLEPS)**

#### **Electrical Improvements**

In November, the contractor working on OLSD's Nutrient Optimization Project completed installation of the #1 water line to supply water from OLSD to the OLEPS safety shower and eyewash station. In December, the contractor continued the installation of two electrical conduits and a two-inch #4 water line from OLSD to OLEPS. The underground portion of the conduit and water line installation was completed prior to the start of paving between OLSD and OLEPS, which was critical so that it would not delay OLSD's Nutrient Optimization Project.

#### **Paving Repair/Upgrade**

On December 11, 2019, the paving between OLSD and OLEPS was completed.



Before Paving



After Paving

**San Leandro Effluent Pump Station (SLEPS)**

No change; all equipment is operational.

**Skywest Pump Station**

**Recycled Water Production**

During the month of December 2019, due to wet weather, the Skywest Recycled Water System did not produce any recycled water. The total recycled water produced during 2019 was 57.15 MG. The peak day of recycled water production in 2019 was 630,500 gallons. The monthly recycled water produced breakdown for the last four years is as follows:

Skywest Total Recycled Water				
	2019 Total Flow MG	2018 Total Flow MG	2017 Total Flow MG	2016 Total Flow MG
January	0.00	0.00	0.00	0.00
February	0.00	2.37	0.00	0.41
March	0.00	0.73	0.25	0.00
April	3.91	1.86	1.80	6.51
May	5.77	9.38	12.00	12.71
June	9.57	12.50	10.97	16.73
July	11.40	12.12	11.98	16.42
August	10.34	10.59	10.41	13.81
September	8.30	7.45	8.12	11.29
October	6.22	6.14	5.58	3.60
November	1.64	2.24	0.00	2.02
December	0.00	0.00	1.24	0.00
Total	57.15	65.38	62.35	83.50

**Marina Dechlorination Facility (MDF)**

No change; all equipment is operational.

**Force Main**

No change; all equipment is operational.

**Operations Center**

**Cyber Security**

The next Quarterly Network Security Management & Coordination meeting is scheduled for January 16, 2020. EBDA staff, Woodard & Curran, Calcon (EBDA's SCADA consultant) and Cayuga Information Systems (EBDA's business IT consultant) continue to work to improve the security of EBDA's SCADA and business networks.

**Miscellaneous Items**

**Underground Service Alerts**

EBDA received twenty-four (24) Underground Service Alert (USA) tickets during the month of December 2019. Three required field verification.

### **Wet Weather**

During the month of December 2019, there were no significant rain events that required the operation of an OLEPS diesel pump or discharge to the Hayward Ponds.

### **Special Projects**

#### **PG&E Large Integrated Audit Program**

EBDA is participating in PG&E's Large Integrated Audit (LIA) program. The LIA Program is a PG&E-sponsored assessment of customer facilities, with a goal of an energy action plan that identifies and prioritizes potential energy and demand savings from energy conservation, energy efficiency, time-of-use management, demand response, and self-generation measures. EBDA's study is being conducted by Alternative Energy Systems Consulting, Inc. (AESC). On December 18, 2019, EBDA staff provided AESC with the data that they requested for the energy analysis.

#### **Transport System Seismic Reliability Plan**

Brown & Caldwell (BC) submitted a preliminary draft of the Transport System Seismic Reliability Plan. Staff is reviewing the draft and providing feedback to BC.

#### **EBDA Facilities Electrical Evaluation**

Beecher Engineering, Inc. will provide a final draft of the EBDA Facilities Electrical Evaluation Report following the incorporation of the OLEPS Standby Power Assessment Report.

#### **Disaster Cost Recovery Planning Services**

EBDA staff is continuing to work with Kermani Consulting Group (KCG) on disaster cost recovery planning. In November, staff provided feedback on KCG's second draft plan. KCG is in the process of finalizing the plan. A training session for Member Agency staff has been planned for February 5, 2020.

#### **Advanced Quantitative Precipitation Information (AQPI) Project**

See Item No. OM6.

**EAST BAY DISCHARGERS AUTHORITY**  
**MONTHLY OPERATION AND MAINTENANCE REPORT**  
**Dec-2019**

1. Summary sheets from the NPDES Report submitted to the RWQCB and EPA are attached for the month of: Nov-19
2. Number of violations reported in the above NPDES Report: **None to Report**
3. The violations included the following: **None Noted**
4. Preventive Maintenance for the month of: Nov-19

LOCATION	NO. TASKS SCHEDULED	NO. TASKS COMPLETED	# TASKS UNFINISHED	PERCENT COMPLETED
San Leandro Pump Station	11	11	0	100%
Oro Loma Pump Station	37	37	0	100%
Sky West Pump Station	13	13	0	100%
Hayward Pump Station	15	15	0	100%
Alvarado Pump Station	45	45	0	100%
Marina Dechlorination Facility	40	40	0	100%
EBDA Responsibility	57	57	0	100%
Force Main - USD	4	4	0	100%
Force Main - San Leandro	55	55	0	100%
<b>Total</b>	<b>277</b>	<b>277</b>	<b>0</b>	<b>100%</b>

5. Unscheduled Maintenance for the month of: Dec-19

LOCATION	NO. OF WORK ORDERS
San Leandro Pump Station	1
Oro Loma Pump Station	1
Hayward Pump Station	0
Alvarado Pump Station	1
Marina Dechlorination Facility	1
Skywest Pump Station	0
Force Main	0

6. Other Items of significance: Dec-19

- a. FM: Transport System Seismic Reliability Plan
- b. AEPS: Effluent Pump No. 6 Refurbishment
- c. OLEPS: Electrical Improvements / New Water Lines / Paving
- d. MDF: No Items
- e. HEPS: MCC Replacement Project
- f. SLEPS: No Items

**ITEM NO. OM6 RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A COOPERATIVE AGREEMENT TO PROVIDE FUNDING FOR SHARED TEMPORARY DEPLOYMENT OF PRECIPITATION FORECASTING SYSTEM WITH SONOMA COUNTY WATER AGENCY**

**Recommendation**

Approve the resolution authorizing the General Manager to enter into a Cooperative Agreement to provide funding for a shared temporary deployment of a precipitation forecasting system with Sonoma County Water Agency (Sonoma Water) and four other East Bay water management agencies as part of the Advanced Quantitative Precipitation Information (AQPI) Project.

**Background**

AQPI is a Bay Area regional project funded by the California Department of Water Resources (DWR) aimed at improving prediction of precipitation, streamflow, and storm surge through data gathering and model improvement. EBDA is part of a consortium of East Bay agencies working to install an X-band radar in the East Bay at Rocky Ridge to improve forecasting for our local microclimates. The radar would be linked to the regional system, as outlined in the attached fact sheet. Sonoma Water is the administrator for the DWR grant and is therefore serving as the administrator for related projects including the East Bay X-band installation. The other participants in the East Bay consortium are East Bay Municipal Utility District, Alameda County Flood Control & Water Conservation District, Alameda County Water District, and Contra Costa County Flood Control and Water Conservation District.

**Discussion**

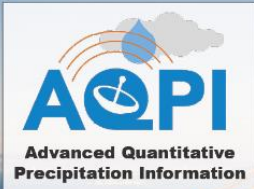
Staff is requesting approval of a Cooperative Agreement to fund installation of the X-band radar. The radar itself is funded by the grant, as is technical support by scientists at the National Oceanographic and Atmospheric Administration. Through the Cooperative Agreement, the East Bay agencies are reimbursing Sonoma Water for costs associated with leasing space for the installation from American Tower and other permitting and operations costs for the temporary installation. The EBDA contribution to this two-year project is \$29,000, which is included in EBDA's FY2019/2020 budget. The total funding for the project, shared among the five participants, is \$165,000. All five agencies are seeking governing board approval of the Cooperative Agreement in January 2020.

It is expected that a broader regional MOU or JPA will be developed for the post-grant funding beyond 2021, which would include O&M of a permanent radar installation at Rocky Ridge if the temporary project is successful. A regional committee, in which EBDA is participating, is beginning to discuss the long-term funding and governance plan. The group is working on a Planning Agreement that staff would sign in early 2020, documenting intent to work together toward a long-term agreement. The Planning

Agenda Explanation  
East Bay Dischargers Authority  
O&M Agenda  
January 14, 2020

Agreement would contain no funding commitments. The next meeting of the regional committee is scheduled for January 15, coinciding with a ribbon-cutting ceremony for the radar installation at Santa Clara Valley Water District. In addition to estimating long-term regional O&M costs and potential cost-sharing schemes, the committee is also discussing joint publicity and pursuit of additional grants and partners.

The current target is for the East Bay radar to be installed by March 2020. The application for lease of the site from American Tower has been submitted, the Federal Communications Commission and East Bay Parks Encroachment Permits have been approved, and the X-band Radar is ready for deployment as soon as agreements are in place.



# SF Bay Area AQPI Project Update

## January 2020

### Background

The SF Bay Advanced Quantitative Precipitation Information (AQPI) System was funded in 2016 by a grant from the California Department of Water Resources (DWR) and awarded to Sonoma Water and participating Bay Area agencies. National Oceanic and Atmospheric Administration (NOAA) is building the AQPI System and delivering the AQPI end-product to these agencies. The goals of the AQPI system when completed will provide X-Band and C-Band radars and information systems that will increase the accuracy of weather forecasting and response systems throughout the Bay Area. Improved forecasting will assist water managers, reservoir operators, wastewater plant managers, flood and emergency responders to respond to extreme water events in a timely fashion. SF Bay AQPI has formed a Local Partner Agency Committee (LPAC) to develop the framework for regional collaboration and agreement.

### AQPI Radar Locations

When completed, there will be four X-Band radars and one C-Band radar that will cover most watersheds in the Bay Area (Figure A).

### Timeline for Radar Installations

As of January 2020, two X-Band radars are operational including one in Sonoma County and one in Santa Clara County. Two more X-Band radars are slated for installation in 2020. It is anticipated that there will be four operating X-Band radars in place by the end of 2020, with a C-Band radar and potentially a fifth X-Band to follow in 2021. Radars locations include:

- **Sonoma Water** - Since 2018 operating a temporary X-band radar near the Sonoma County Airport. A permanent X-Band radar is anticipated to be installed Spring 2020 on Sonoma Mountain.
- **Valley Water** - Since 2016 operating a temporary X-Band radar at the Penitencia Water Treatment Plant. A permanent X-Band radar has been installed in July 2019 at the same location.

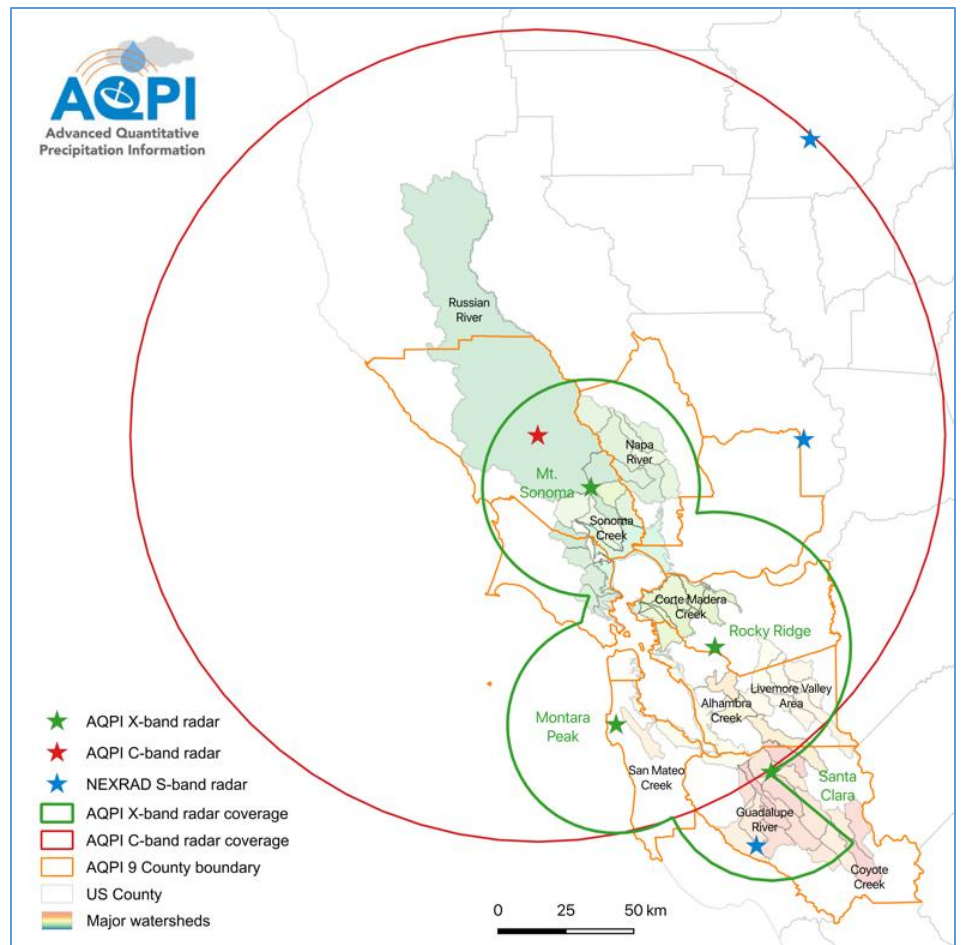
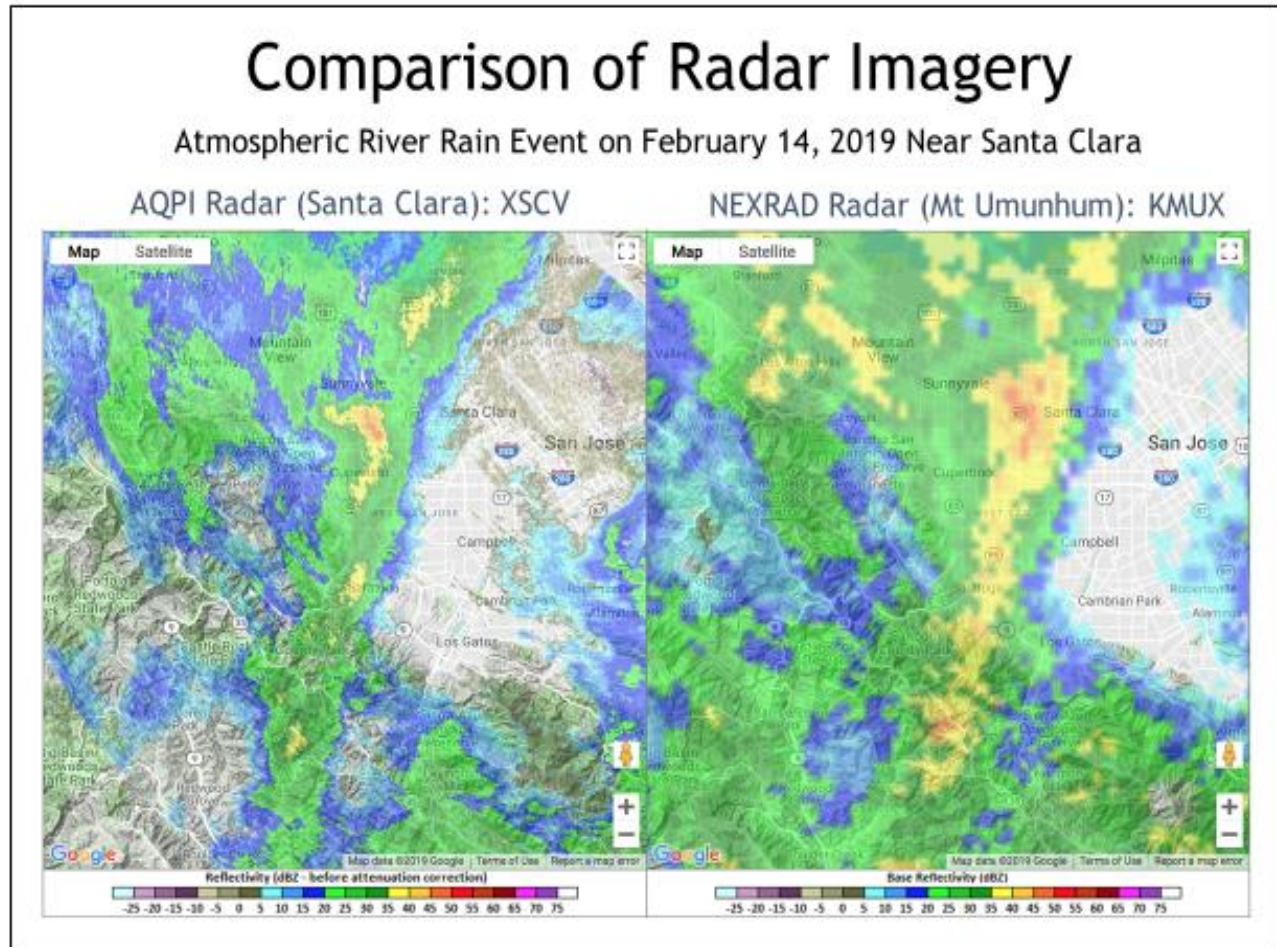


Figure A. Map of AQPI X-Band and C-Band Radar locations by 2020.

- **San Francisco Public Utilities Commission (SFPUC)** – Plans to install a permanent X-Band Radar at Montara Mountain in San Mateo County in 2020.
- **East Bay Agencies Partnership** – A partnership of East Bay agencies is working on a pilot project to site a high definition radar on Rocky Ridge, adjacent to the Las Trampas Wilderness area in 2020. This partnership includes East Bay Municipal Utility District (EBMUD), East Bay Dischargers Authority (EBDA), Contra Costa County Flood Control & Water Conservation District, Alameda County Flood Control & Water Conservation District, and Alameda County Water District (ACWD).
- **Santa Cruz County Flood Control and Water Conservation District** received a grant from DWR’s Statewide Flood Emergency Response Grant program to install a permanent X-Band radar. This radar, which is not shown on the map in Figure A will tie into the Bay Area AQPI system.
- **C-Band Radar** - Regional partners are collaborating to site and install a C-Band radar in the North Bay. The C-Band radar will cover the Pacific Coast as well as inland to complement the X-Band radars, improving storm forecasting throughout the region.

## AQPI Benefits: AQPI Radar Imagery from 2019 Atmospheric River Storm

Flooding is a major concern in the Bay Area. The difference between existing radar rainfall data and AQPI are a striking example. See below in Figure B, where AQPI radar provides a more accurate picture of rainfall in Santa Clara, to better assess the potential for flooding. Note - Warmest colors represent highest rain volume.



### FOR MORE INFORMATION:

**Jake Spaulding**, Sonoma Water, (707) 524-8373, [Jake.Spaulding@scwa.ca.gov](mailto:Jake.Spaulding@scwa.ca.gov)

**Rob Cifelli**, NOAA Earth System Research Laboratory, (303) 497-7369, [rob.cifelli@noaa.gov](mailto:rob.cifelli@noaa.gov)

Visit: <http://www.esrl.noaa.gov/psd/aqpi/>

**EAST BAY DISCHARGERS COMMISSION**  
**EAST BAY DISCHARGERS AUTHORITY**  
**ALAMEDA COUNTY, CALIFORNIA**

RESOLUTION NO. 19-49

INTRODUCED BY \_\_\_\_\_

**RESOLUTION AUTHORIZING THE GENERAL MANAGER TO ENTER INTO A  
COOPERATIVE AGREEMENT TO PROVIDE FUNDING FOR SHARED TEMPORARY  
DEPLOYMENT OF PRECIPITATION FORECASTING SYSTEM WITH SONOMA  
COUNTY WATER AGENCY**

**WHEREAS**, the East Bay Dischargers Authority and its Member Agencies experience higher flows during wet weather as a result of inflow and infiltration; and

**WHEREAS**, the ability to predict the arrival time, duration, and magnitude of storm events enhances the Authority's and its Member Agencies' ability to plan, staff, and operate facilities in wet weather; and

**WHEREAS**, staff has determined that participating in the Advanced Quantitative Precipitation Information (AQPI) Project and cooperatively funding installation of an X-band radar in the East Bay will improve these prediction capabilities; and

**WHEREAS**, Sonoma County Water Agency has volunteered to serve as the administrating agency to manage associated funds and resources and coordinate East Bay radar installation; and

**WHEREAS**, the Authority is one of five East Bay agencies entering into a Cooperative Agreement with Sonoma County Water Agency to fund these services.

**NOW, THEREFORE BE IT RESOLVED**, the Commission of the East Bay Dischargers Authority hereby authorizes The General Manager to enter into a Cooperative Agreement to provide \$29,000 for shared temporary deployment of a precipitation forecasting system with Sonoma County Water Agency.

**SAN LORENZO, CALIFORNIA, JANUARY 16, 2020, ADOPTED BY THE FOLLOWING VOTE:**

**AYES:**  
**NOES:**  
**ABSENT:**  
**ABSTAIN:**

\_\_\_\_\_  
**CHAIR**  
**EAST BAY DISCHARGERS COMMISSION**

**ATTEST:** \_\_\_\_\_  
**GENERAL MANAGER**  
**EAST BAY DISCHARGERS AUTHORITY**  
**EX OFFICIO SECRETARY**